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INVESTIGATION OF SKYLAB DATA

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Monthly Plans and Progress Report

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Photo-interpretation of the S-190 A and S-190 B data has been essentially completed under the leadership of Dr. Wayne Myers. The basic equipment used was a Bausch and Lomb Zoom 240 Stereoscope mounted on a Richards light table.

The S-190 A imagery was highly variable between passes, between film-filter combinations in the same pass and between duplicates of the same filmstrip. Resolution was marginal for purposes of crop-acreage estimation. Interpretation was slow and double-sampling (imagery from two passes) was required to obtain 90 percent accuracy.

The S-190 B imagery provided adequate resolution but the natural color film does not provide enough signature contrast between cover types to allow detailed crop classification from imagery obtained on a single date. Temporal overlays are a possibility for obtaining a more detailed classification. A test based on Locke Township, Ingham County data from the August 5, 1973 pass indicated that 133 of 170 fields were correctly classified with the lowest level of accuracy for corn. Some of the corn was tasselled; that not tasselled was incorrectly classified as "other".

The average field size was about 20 acres or 32 fields per section. An experienced photo-interpreter required approximately 63 seconds per field (standard deviation of 34 seconds) for S-190 B imagery. These estimates allow no break or rest time and were based on a "fresh" person.